Elementary school teachers' attitudes toward individualizing reading instruction were examined in the evaluation of the Wisconsin Design for Reading Skill Development (WDRSD). An instrument was constructed in the semantic differential format. Teachers were asked to respond anonymously on adjective scales to eleven example classroom procedures designed as applications of the assumptions of individualized reading instruction. Reliability of the instrument was high (.925); content validity was demonstrated for the examples and adjectives used in the instrument. Two studies validated the instrument experimentally. In one, teachers' attitude inventory scores were compared by a t-test in two types of schools: ones in which the WDRSD had been adopted; and ones in which no known emphasis was placed on individualization. Mean inventory scores were significantly higher (p<.05) in the schools where individualization was systematically provided for than in the other schools. In another study the change in teachers' attitudes was studied after a school had adopted the WDRSD. Teachers' inventory scores in the fall prior to in-service training were compared by a t-test for matched pairs to those obtained in the spring after one year's use of the system. The spring scores were significantly higher (p<.001) than those obtained before use of the WDRSD. A copy of the instrument is appended. See ED 025 531 for an earlier report on the development of the instrument.
ASSessment of Teachers' Attitudes Toward an Individualized Approach to Reading Instruction

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The importance of individualizing instruction—also known as "individually guided education" or "diagnostic teaching"—has been recently emphasized in reading. Regardless of terms, the notion is that instruction should be based on assessment of children's individual strengths and weaknesses on predetermined objectives for instruction. In order for this type of instruction to become a classroom reality, teachers must focus on the needs of individuals rather than on the needs of the group. This orientation toward instruction may require a basic change in teachers' attitudes.

When an individualized reading program—the Wisconsin Design for Reading Skill Development—was implemented in several schools, we wanted information on whether a corresponding change in teachers' attitudes had occurred. In other words, although the procedures for instruction had changed so that individualization was being systematically practiced, did teachers' attitudes toward individualization
also change?

The literature on attitude assessment was surveyed in an attempt to find an instrument that would assess teachers' attitudes toward individualizing instruction. One instrument, the San Diego Teacher Inventory of Approaches to the Teaching of Reading (1961), measures teachers' agreement with the assumptions of three instructional approaches—basic, individualized, and language experience. The definition of the individualized approach, however, is the classic one advocated by Veatch (1959) and others, involving the principles of seeking, self-selection, and self-pacing. The San Diego inventory, consequently, does not measure teachers' attitudes toward our concept of individualization.

An instrument for assessing teachers' attitudes toward individualizing reading instruction was thus constructed. Two studies were then conducted to determine if adoption of an individualized approach to reading instruction did in fact lead to a change in attitudes.

Methods and Results

Development of the Instrument

An indirect means of assessing attitudes—the semantic differential—was chosen as the format of the attitude inventory, called the Reading Teacher Survey. Rummers (1963), summarizing several studies that have employed the semantic differential in assessing attitudes for various purposes, cautioned that a bias due to response-sets may be operating. In other words, the order of presentation of
the concepts to be evaluated may influence the responses of the subject. More recently, however, Kane (1969), analyzing data from a semantic differential instrument which included various combinations for ordering items, showed that item order is not a significant factor and that an experimenter need not worry about proximity errors.

Osgood, Suci, and Tannenbaum (1957) have discussed the basic flexibility in using the semantic differential:

Although we often refer to the semantic differential as if it were some kind of 'test,' having some definite set of items and a specific score, this is not the case. To the contrary, it is a very general way of getting at a certain type of information, a highly generalizable technique of measurement which must be adapted to the requirement of each research problem to which it is applied. There are no standard concepts and no standard scales; rather, the concepts and scales used in a particular study depend upon the purposes of the research (p. 76).

Two adaptations of the basic semantic differential instrument, as described by Osgood et al., were made. First, analysis of the three factors found by Osgood et al.—evaluation, potency, and activity—was not undertaken since measurement of a unitary concept of attitude toward individualizing reading instruction seemed more desirable.
The second adaptation of the semantic differential was the inclusion of the agree-disagree scale. The purpose of its inclusion was to determine whether subjects would tend to respond more positively to that scale than to the other scales which consisted of adjectives. This notion was in fact supported by the data.

After several pilot studies involving item analyses and subsequent revisions, the instrument was ready for use. It consisted of eleven examples of classroom situations which illustrated instructional procedures that would grow out of the assumptions of individualized reading instruction. Teachers, who did not sign their names, were asked to consider the feasibility of applying each of the eleven examples in their classrooms. They were instructed to record their responses on as many as seven rating scales following each example. The rating scales consisted of adjectives picked from the literature describing individualized reading instruction.

The instrument was judged by three scholars in the field of reading to have content validity in that the classroom examples and rating scales were relevant to measuring teachers' attitudes toward individualizing reading instruction. The estimate of reliability or internal consistency (Hoyt reliability coefficient), based on data from 27 subjects, was .925.

Studies of Teachers' Attitudes

Two types of questions were asked in determining whether teachers' attitudes were related to the adoption of the Wisconsin Design for
Reading Skill Development: (1) Were the attitudes of teachers who had been systematically using the Wisconsin Design to individualize reading instruction different from those of teachers who were not? (2) Would a change in teachers' attitudes occur when the instructional procedures in a school had changed from a conventional approach to a system of diagnostic testing and planned instruction through the use of the Wisconsin Design?

Study 1. The instrument was administered to the teachers in two types of schools. The first type of school (Type 1) had successfully implemented the Design at least a year prior to the study, and teachers were systematically assessing pupil needs in terms of behavioral objectives and planning instruction accordingly. In the second type of school (Type 2) there had been no known emphasis on individualizing reading instruction. The Reading Teacher Survey was administered in the fall of 1969 in two Type 1 schools and in five Type 2 schools in small or middle-sized cities in Wisconsin. All classroom teachers of grades 1-6 took the inventory; special teachers--such as reading teachers--were not included in the sample.

A t test was performed on the data, using an estimate of the pooled variance of the means in the two types of schools. The .05 level for two-tailed t test was designated as the level of significance for testing the difference between means. Table 1 presents the means and standard deviations of scores for teachers in the seven schools. The obtained t value ($t = 3.17$) from testing the differences
between means of inventory scores in Type 1 and Type 2 schools was significant in the expected direction at the .05 level for a two-tailed test with five degrees of freedom. It can also be noted from Table 1 that the ranges of the observed means obtained in the two types of schools did not overlap.

- - - - - - - - - - - -
Insert Table 1 about here
- - - - - - - - - - - -

Study 2. During the 1969-70 school year School #2 of the Type 2 schools adopted the Wisconsin Design as a means of individualizing reading instruction. The Reading Teacher Survey, Revised Version had been administered in the fall before inservice training on individualization was given, and it was readministered at the end of the school year to determine if a change in attitudes had occurred after teachers had been systematically individualizing reading instruction for one year. Although teachers did not sign their names, the inventories taken by each teacher in the fall and spring were paired together by coding the inventories. The means and standard deviations of inventory scores at each administration time are presented in Table 2. (The data in Table 2 for the fall administration are slightly different from the figures given in Table 1 for the same school; several teachers were omitted from the sample in Study 2 because they resigned during the school year.)

- - - - - - - - - - - -
Insert Table 2 about here
- - - - - - - - - - - -

6
A t test for matched pairs was performed on the data. The obtained t value ($t = 4.09$) was significant in the expected direction beyond the .001 level for a two-tailed test with 16 degrees of freedom.

Implications

Attitudes of teachers apparently do change as their classroom procedures for instruction change. In two studies it was demonstrated that attitudes of teachers using a system for individualizing reading instruction were more positive toward the philosophy of individualization than teachers who had no such system.

If teachers are provided behavioral objectives and assessment tools, as with the Wisconsin Design, they react positively toward diagnosing each student's needs and planning individual instructional programs accordingly. If they have no system to facilitate individualization, their attitudes toward the philosophy of individualization are less positive. If one wishes to promote individualization, then, some systematic means for aiding teachers with the process of individualization should be provided.
References


San Diego County, Department of Education, Reading Study Project Committee. Teacher inventory of approaches to the teaching of reading. Monograph No. 4, 1961.

Table 1
MEANS AND STANDARD DEVIATIONS OF INVENTORY
SCORES IN TYPE 1 AND TYPE 2 SCHOOLS

<table>
<thead>
<tr>
<th>Schools</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1 Schools:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1 ($x_1$)</td>
<td>388.667</td>
<td>1.126</td>
<td>21</td>
</tr>
<tr>
<td>#2 ($x_2$)</td>
<td>365.375</td>
<td>24.150</td>
<td>8</td>
</tr>
<tr>
<td>Grand Mean ($\bar{x}$)</td>
<td>377.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 2 Schools:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1 ($y_1$)</td>
<td>362.333</td>
<td>18.325</td>
<td>21</td>
</tr>
<tr>
<td>#2 ($y_2$)</td>
<td>338.095</td>
<td>32.417</td>
<td>21</td>
</tr>
<tr>
<td>#3 ($y_3$)</td>
<td>331.833</td>
<td>33.294</td>
<td>6</td>
</tr>
<tr>
<td>#4 ($y_4$)</td>
<td>328.200</td>
<td>3.488</td>
<td>15</td>
</tr>
<tr>
<td>#5 ($y_5$)</td>
<td>327.500</td>
<td>8.069</td>
<td>10</td>
</tr>
<tr>
<td>Grand Mean ($\bar{y}$)</td>
<td>337.592</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2
MEANS AND STANDARD DEVIATIONS OF INVENTORY SCORES IN TYPE 2 SCHOOL #2

<table>
<thead>
<tr>
<th>Administration Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>336.353</td>
<td>32.846</td>
<td>17</td>
</tr>
<tr>
<td>Spring</td>
<td>361.118</td>
<td>38.215</td>
<td>17</td>
</tr>
</tbody>
</table>
APPENDIX

Reading Teacher Survey
Reading Teacher Survey

The following are examples of ways of solving problems in the classroom. The intent of this survey is to find how applicable the examples are in actual practice. In rating each statement, consider your particular teaching situation—rate each statement according to your experience in your classroom. Each example should be judged in terms of the effect of the classroom situation upon the teacher in handling the reading instructional program.

In this booklet you will find eleven different examples to be judged and beneath each a set of scales. You are to rate the example on each of the scales given below the example. The scales which you use in judging the applicability of the examples in your classroom are as follows:

- agree
- ineffective
- challenging
- disorganized
- practical
- fair
- inefficient
- disagree
- effective
- unchallenging
- organized
- impractical
- unfair
- inefficient

Here is how to use the scales:

If you feel that the example at the top of the page is very closely related to the one end of the scale, you should place your check-mark as follows:

- fair _X_: _:_:_:_:_:_ unfair
  OR
  - fair _:_:_:_:_:_:_:_ _ unfair

If you feel that the example is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

- fair _:_:_:_:_:_:_:_ unfair
  OR
  - fair _:_:_:_:_:_:_ _ unfair
If the example seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

fair ___:__:X:::__: unfair

OR

fair ___:__:__:__:X:::__: unfair

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If you consider the example to be neutral on the scale, both sides of the scale equally associated with the example, or if the scale is completely irrelevant, unrelated to the example, then you should place your check-mark in the middle space:

fair ___:__:X:::__: unfair

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

   THIS NOT THIS
   ___:X:::__:X:::__:

(2) Be sure you check every scale for every example--do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the inventory. This will not be the case so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the inventory. Make each item a separate and independent judgment. Work at a fairly high speed through this inventory. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

REMEMBER: Rate each statement, or example, in terms of the effect upon the teacher in handling reading instruction. Consider how feasible each example would be if applied in your classroom.
Here is a sample statement to show you how to take this inventory:

EXAMPLE:

A. Lucy, Larry, Joe, and Dick need work on recognizing final consonant sounds in words. It is feasible for the teacher to work with these children in a small group until they have mastered this skill.

agree ___:___:___:___:___:___ disagree
ineffective ___:___:___:___:___:___ effective
challenging ___:___:___:___:___:___ unchallenging
disorganized ___:___:___:___:___:___ organized
practical ___:___:___:___:___:___ impractical
fair ___:___:___:___:___:___ unfair
inefficient ___:___:___:___:___:___ efficient

Mark each scale in terms of the effect upon you, the teacher, if this example of instruction were applied in your classroom.

1. Pete and Gary are among the best readers in their third-grade class. It is feasible for the teacher to know that Pete has trouble reading social studies books while Gary who has no trouble with factual material cannot understand non-literal material.

agree ___:___:___:___:___:___ disagree
ineffective ___:___:___:___:___:___ effective
challenging ___:___:___:___:___:___ unchallenging
disorganized ___:___:___:___:___:___ organized
practical ___:___:___:___:___:___ impractical
fair ___:___:___:___:___:___ unfair
inefficient ___:___:___:___:___:___ efficient
2. It is possible for the teacher to know that Dennis is poor in picking out the main idea of a paragraph but good at recognizing all consonant and vowel sounds.

agree .......................... disagree
ineffective ...................... effective
disorganized .................... organized
practical ......................... impractical
fair ................................ unfair
inefficient ....................... efficient

3. Although Ruth is working in more than one set of materials to learn the short a sound, it is possible for the teacher to know which skill she should be taught next.

agree .......................... disagree
ineffective ...................... effective
challenging ...................... unchallenging
disorganized .................... organized
practical ......................... impractical
inefficient ....................... efficient

4. It is feasible for a second grade teacher to use the same 2-1 basal reader with the whole class.

agree .......................... disagree
ineffective ...................... effective
challenging ...................... unchallenging
disorganized .................... organized
inefficient ....................... efficient
5. It can be expected that a second grade teacher will know when and how to teach outlining skills to Gary who reads far above grade level.

challenging _____ :____ :_____ :____ unchallenging

disorganized _____ :____ :_____ :____ organized

practical _____ :____ :_____ :____ impractical

fair _____ :____ :_____ :____ unfair

inefficient _____ :____ :_____ :____ efficient

6. It is feasible for Mary Lou, who has not mastered initial consonant sounds, to continue work on them although the rest of the children have mastered this skill and have moved on to new materials.

agree _____ :____ :____ :____ :____ disagree

challenging _____ :____ :_____ :____ unchallenging

practical _____ :____ :_____ :____ impractical

fair _____ :____ :_____ :____ unfair

7. It is feasible in a second grade classroom to provide Pete with fourth grade materials which he can read and to give Peggy pre-primer material which is appropriate for her.

agree _____ :____ :_____ :____ :____ disagree

challenging _____ :____ :_____ :____ :____ unchallenging

disorganized _____ :____ :_____ :____ organized

practical _____ :____ :_____ :____ impractical

fair _____ :____ :_____ :____ unfair

inefficient _____ :____ :_____ :____ efficient

16
8. Marjorie, David, Howard, Dorothy, and several others are working together in a small group on recognizing certain consonant blends. It is possible for the teacher to assess at almost every group meeting which children have mastered this skill and to modify teaching accordingly.

agree ___:___:___:___:___:___ disagree
ineffective ___:___:___:___:___:___ effective
challenging ___:___:___:___:___:___ unchallenging
disorganized ___:___:___:___:___:___ organized
practical ___:___:___:___:___:___ impractical
fair ___:___:___:___:___:___ unfair
inefficient ___:___:___:___:___:___ efficient

9. Jim does not seem to have much interest in reading in the basal reader. The teacher can effectively use non-basal materials to teach him reading skills.

disorganized ___:___:___:___:___:___ organized
fair ___:___:___:___:___:___ unfair
inefficient ___:___:___:___:___:___ efficient

10. Jim, Dennis, Gary, Ruth, and Pete all need work on the vowel diphthongs of and oy. It is feasible to meet with this group once or several times, depending on the length of time needed for mastering these sounds in words.

agree ___:___:___:___:___:___ disagree
ineffective ___:___:___:___:___:___ effective
challenging ___:___:___:___:___:___ unchallenging
disorganized ___:___:___:___:___:___ organized
practical ___:___:___:___:___:___ impractical
fair ___:___:___:___:___:___ unfair
inefficient ___:___:___:___:___:___ efficient
11. Gary has mastered all the work taught to the class very quickly. It is feasible to allow him to start working on vowel digraphs even though the rest of the class still is working on consonant blends and short vowel sounds.

agree __:___:___:___:___:___ disagree
ineffective __:___:___:___:___:___ effective
d'sorganized __:___:___:___:___:___ organized
fair __:___:___:___:___:___ unfair
inefficient __:___:___:___:___:___ efficient